

REMARKS

Claims 1-14, 16-36, 39-40, and 65-79, and 81-93 are pending. Claims 1-14, 16-36, 39-40, and 65-79, and 81-89 have been amended. Claims 1, 26, 28, 39 and 40 have been amended for clarification, to use preferential language, and/or to remedy informalities as explained below. The remaining claims have also been amended to make their preambles conform to those of their respective independent claims. New dependent claims 90, 91, and 92, depending from independent claims 1, 26 and 39, respectively, have been added to explicitly recite subject matter involving the use of an exciter to broadcast data content via digital radio broadcast. The preambles of independent claims 1, 26 and 39 have been correspondingly broadened to refer to a digital radio broadcast system, insofar as an exciter referred to in claims 90, 91 and 92 is not a component of a gateway. New independent claim 93 has also been added herein, which recites subject matter similar to that recited in claim 1 but using different language. Reconsideration of the present application is respectfully requested.

Request for Interview

A diligent effort has been made to place this application in condition for allowance. Should the Examiner disagree with the remarks presented herein and believe that the application is not in condition for allowance, the Examiner is respectfully urged to contact the undersigned before issuing another office action so that this matter can be discussed in a personal interview with the Examiner to resolve any remaining issues.

Objections

The Office Action includes an objection to the specification as failing to provide proper antecedent basis of the claimed subject matter of a "computer readable medium," the Examiner interpreting such as a "storage medium." The Examiner's interpretation is correct, and claims 39 and 40 have been amended for conformity with that interpretation. Withdrawal of the objection is respectfully requested.

Claims 28 was objected to for a minor informality, and claim 28 has been suitably amended to address the objection. Withdrawal of the objection is respectfully requested.

Claim Rejections Under 35 U.S.C. § 112

Claims 1-14, 16-36, 39-40, 65-79 and 81-89 stand rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description requirement. The Office Action alleges that the specification does not disclose “said scheduler *determining said broadcast times and schedule* based upon said instructions from the content provider *without any user request for said data content.*” Office Action at p. 3 (emphasis original). This rejection is respectfully traversed.

As an initial matter, it is believed that the Office’s rejection reflects an interpretation of the claim language that was not intended. Independent claims 1, 26 and 39 have been amended to alleviate any potential confusion, and it is respectfully submitted that the amended language and the prior language of the those claims are fully supported by the specification.

In particular, the undersigned spoke with Examiner Lee by telephone on March 16, 2009 to gain clarification regarding the rejection under Section 112. The Examiner indicated his recollection that he did not see where the specification explicitly disclosed tying the limitation “without any user request for said data content” to the limitation “said scheduler determining said broadcast times and schedule.” The Examiner also indicated his recollection that he did not see explicit disclosure in the specification for the limitation “without any user request for said data content.”

First, it was not the intent of the prior Amendment to tie the limitation “without any user request for said data content” to the limitation “said scheduler determining said broadcast times and schedule” so as to present claims that would merely require that the *scheduler itself* would not receive a user request for data content. Rather, the limitation “without any user request for said data content” was intended to have broader impact, namely that the data content was processed for digital radio broadcast transmission with any user request whatsoever for that data content. To clarify this aspect, claim 1, for example, has been amended to remove the language “without any user request for said data content” from the scheduler limitation, and to present as a separate limitation the language “the digital radio broadcast system processing the data content to be pushed to the digital radio broadcast receivers of the users via digital radio broadcast transmission without user-initiated requests for the data content.” Claims 26 and 39 have been similarly amended

Second, the specification provides ample support for both the amended language and the prior language of claims 1, 26 and 39. For example, paragraph 0016 of the present application states, among other things, that data is “pushed” from the gateway to consumer devices (“The employed transmission protocol for data pushes from the gateway to the targeted consumer devices (within reach of the IBOC broadcast network) supplements the existing network broadcast protocols by enabling continuous broadcast of digitized content without the use of sessions.”), and paragraph 0051 states that the consumer devices can be digital radio receivers. Paragraph 0004 states that broadcast media utilize “push” technologies in which “information is sent out (pushed) regardless of whether anyone is tuned in,” and paragraph 0011 explicitly states that “push” technology “does not require a user initiated data request prior to the transmission of data.” Paragraph 0037, referring to the gateway as an iPPG, states that the providers “push” content to the gateway (“In FIG. 1, the remote application service providers (ASPs) 102 submit (or Push) content, over a network N (e.g., the Internet) via a protocol such as HTTP, to the iPPG 104.”). Of course, the claims are not limited to these examples.

Thus, there is ample support in the specification for the amended claim language (and the prior claim language), including explicit textual support for the limitation “without user-initiated requests for said data content” as now recited. Withdrawal of the rejection under 35 U.S.C. 112 is respectfully requested for at least these reasons.

Claim Rejections Under 35 U.S.C. § 103

Claims 1, 8, 13-14, 18, 21-23, 25, 66, 73, 78-79, 83, 86-87 and 89 stand rejected under 35 U.S.C. § 103(a) over U.S. Publication No. 2006/0073810 (“Pyhalammi”) in view of U.S. Publication No. 2002/0095228 (“Corts”). In particular, the Office alleges that Pyhalammi discloses all of the features recited in claim 1 except for an encoder for encoding data content and transmission via digital radio broadcast transmission to a digital radio broadcast receiver. Office Action at pp. 3-4. The Office alleges that these features missing from Pyhalammi are disclosed in Corts, and that it would have been obvious to combine those features with Pyhalammi’s system “to utilize In-Band On-Channel (IBOC) technology to broadcast digitized data along with the digital audio to wireless devices.” Office Action at p. 4. In responding to Applicant’s prior Amendment, the Office further stated, “Pyhalammi

teaches a Message Buffering and Scheduling Engine that determines broadcast times and schedule based on the delivery class in message 50 from [the] provider without the *Message Buffering and Scheduling Engine* receiving any request for content,” reflecting the Office’s interpretation that the prior language of claim 1 merely required that the *scheduler itself* would not receive a user request for data content. Office Action at p. 18 (emphasis added). The Office’s interpretations and suggested hypothetical combination are respectfully traversed.

The Rejection does not State a Proper Reason for the Hypothetical Combination of References, Nor Would There be an Expectation of Success

First, the rejection does not make out a *prima facie* case of obviousness at least because the Office’s hypothetical combination of Pyhalammi and Corts is premised upon flawed reasoning. In particular, Pyhalammi’s system *already provides* for the digital audio and digital data services that the Office suggests should be obtained from Corts. As noted above, the Office Action alleges that it would have been obvious to combine features of Corts with those of Pyhalammi “to utilize In-Band On-Channel (IBOC) technology *to broadcast digitized data along with the digital audio to wireless devices.*” Office Action at p. 4 (emphasis added). This reasoning is facially flawed insofar as Pyhalammi’s system *already provides both the digitized data and digital audio* that the user of Pyhalammi’s desires. Claim 10 of Pyhalammi, for example, explicitly indicates that the content can include audio as well as other types of data – text, pictures, video, and browsing information (“The method of claim 1 wherein said content is comprised of different types of messages, such as: text, pictures, audio, video, and browsing information.”). Pyhalammi’s disclosure makes it plainly evident that this information is digital in nature (*see, e.g.*, paragraph 0020 of Pyhalammi, “an individual . . . may use a hand-held wireless terminal 30 . . . enabled with a browser to view and select web-based content from a Content/Service Provider 13 via a data network such as the internet.”). Moreover, paragraph 0008 of Pyhalammi explicitly states that Pyhalammi’s alleged invention will provide “new data services”:

The present invention will introduce a mechanism that allows operators to provide *new data services* (especially high-volume content) cheaper without sacrificing their high-margin business,

thus enabling more services, as well as attracting more users. The present invention further allows *data traffic* on a wireless network to be more evenly distributed over a twenty-four hour day cycle, thus actually increasing the total network throughput, without having to upgrade the wireless network components. The present invention will provide users with new services at a reduced price, directly to their wireless device.

Paragraph 0008 of Pyhalammi (emphasis added).

Thus, it is clear that Pyhalammi's system already provides for digitized data and digital audio that the Office cites as a basis for borrowing features from Corts. Contrary to the Office's suggestion, there would be no reason for one skilled in the art to seek digital data and digital audio services according to the system of Corts when both digital data and digital audio services are already provided by Pyhalammi's system. One skilled in the art would not seek to increase the complexity and cost of Pyhalammi's system by including features from the system of Corts "to broadcast digitized data along with the digital audio to wireless devices" when Pyhalammi's system already provides those services. Accordingly, the Office's proffered reason for the hypothetical combination is facially flawed and is suggestive of impermissible hindsight reasoning. Withdrawal of the rejection is respectfully requested for at least these reasons.

Moreover, it is believed that one skilled in the art would not have found it obvious to modify the Pyhalammi system to use the in-band on-channel (IBOC) broadcasting of Corts in the manner suggested by the Office since there would be no expectation of success. The infrastructures for cellular and IBOC systems are vastly different and, among other things, use different transmission frequencies. In addition, in cellular communication, a user and a transmitter engage in two-way communication over the frequencies allotted; in contrast; in IBOC, a receiver does not send transmissions back to a transmitter over the frequency range over which the receiver receives transmissions. The Office has provided no details whatsoever as to how to account for and meld such significant differences. In fact, the rejection is entirely devoid of necessary details at the most basic level as to just what is hypothetically being modified to bring IBOC into Pyhalammi's transmission system. Surely, such a modification could not be successful simply by borrowing the encoder of Corts as suggested in the Office Action. Is the Office suggesting that it would have been obvious to modify the broadcast infrastructure of Pyhalammi to include IBOC transmission as in Corts?

Is the Office suggesting that it would have been obvious to make a hybrid combination cellular phone/IBOC radio receiver at the time of Pyhalammi's alleged invention? The rejection is facially improper for being substantially devoid of sufficient details as to what is being hypothetically modified and why, and should be withdrawn for at least these additional reasons.

The Hypothetical Combination Would Not Yield the Combinations of Features Claimed

As noted above, claim 1 has been further amended for clarification, and is respectfully submitted that even if the Office's hypothetical combination were made, for the sake of argument, the result would not yield the combination of features recited in claim 1.

Claim 1 recites a digital radio broadcasting system for processing over the air transmissions of data content. The digital radio broadcasting system includes a gateway that comprises a processing system and a memory coupled to the processing system. The processing system comprises a network inbound queue for the reception of data content and instructions from a content provider; a scheduler for processing said instructions from the content provider to determine broadcast times and schedule for said data content to be received by digital radio broadcast receivers of users. The processing system also comprises an encoder for encoding said data content for digital radio broadcast transmission; an addressing module for processing said instructions for extracting addressing information; and an outbound queue for storing said encoded data content. Claim 1 has been amended to recite that the digital radio broadcast system processes the data content to be pushed to the digital radio broadcast receivers of the users via digital radio broadcast transmission without user-initiated requests for said data content.

In this regard, claim 1 does not merely require that the scheduler itself does not receive a user initiated request for data content. Rather, claim 1 explicitly requires a "push" scenario in which data content is processed to be pushed to digital radio broadcast receivers of users via digital radio broadcast transmission *without user-initiated requests* for that data content whatsoever. In other words, the data content is processed at the transmit side for digital radio broadcast transmission regardless of any actions of the users of the digital broadcast receivers. The users of the digital radio broadcast receivers do not request data content whatsoever, they merely "tune in" if they wish to receive it. Indeed, as noted at

paragraph 0004 of the present application, radio broadcast transmissions are sent out (pushed) regardless of whether or not anyone is even tuned in.

In contrast, the system of Pyhalammi is vastly different than that recited in claim 1. Pyhalammi discloses a method for delivering mobile content over a cellular wireless network wherein *a user* of a hand-held wireless device, such as a cellular phone equipped to access information from the Internet, *actively submits a request for content*, and that content is then transmitted to the user in response to the user's content request. (See, e.g., Pyhalammi at paragraphs 0007, 0020.) This form of communication is *pull* technology, since the communication involves requesting data from another source. As noted at paragraph 0006 of the present application, "Pull refers to requesting data from another program or computer. The opposite of Pull is Push, where data is sent without a request being made." Thus, the pull-type radio communication in Pyhalammi's system is vastly different than the push-type digital radio broadcast required by claim 1.

In fact, Pyhalammi's disclosure explicitly reflects that the user's active request for content is central to Pyhalammi's system:

In a preferred embodiment of the invention there is provided a system and method whereby *a user who has requested content* selects a class of delivery for the content Pyhalammi at paragraph 6 (emphasis added);

In a preferred embodiment, a *user's content request* is sent to a Content/Service Provider which creates a content delivery message with the requested information including the content and delivery class. Pyhalammi at paragraph 7 (emphasis added);

The *end-user locates content he wishes to receive* via a browsing screen 31 on his wireless terminal device 30. On the screen, the *end-user selects the content* and the desired class of delivery. Pyhalammi at paragraph 22 (emphasis added);

User browses content via wireless terminal device. Pyhalammi, Fig. 4, Step 40 (emphasis added);

User orders content. Pyhalammi, Fig. 4, Step 41 (emphasis added).

Indeed, the Office Action of 12/18/2007 at page 20, paragraph 77 expressly acknowledged that the *user* of Pyhalammi's system is responsible for selecting the content ("the delivery class is automatically selected based on the user selected content . . .").

Thus, even if the Office's hypothetical combination were made, the result would not yield the combination of features claimed. For at least the above-noted reasons, and for other reasons already of record, withdrawal of the rejection and allowance of claim 1 is respectfully requested. Claims 8, 13-14, 16, 18, 21-23, 25, 66, 73, 78-79, 81, 83, 86-87 and 89 are allowable at least by virtue of their dependence from claim 1.

Claims 5, 20, 26, 39, 65, and 85 stand rejected under 35 U.S.C. § 103(a) over Pyhalammi in view of Corts and further in view of U.S. Patent No. 6,745,237 ("Garrity"). Office Action at p. 7. Independent claims 26 and 39 have been amended in ways similar to those for claim 1, and it is respectfully submitted that independent claims 26 and 39 are patentable over the Office's combination of applied references.

In rejecting independent claims 26 and 39, the Office substantially invokes the rejection as applied to claim 1, and relies upon Garrity for an alleged disclosure of an authenticator. Office Action at pp. 8-9. As such, even if the Office's hypothetical combination were made, for the sake of argument, the Office's reliance upon Garrity would not make up the for deficiencies of Pyhalammi and Corts as described above with regard to claim 1. Thus, withdrawal of the rejection and allowance of independent claims 26 and 39 is requested for at least these reasons. Claims 5, 20, 65, and 85 are allowable at least by virtue of dependency.

The Office Action includes further rejections of various dependent claims in view of other combinations of applied references and in view of Official Notice:

claims 2, 3, and 67-68 were rejected under 35 U.S.C. § 103(a) over Pyhalammi in view of Corts and further in view of Miller (U.S. Publication No. 2003/0055977);

claims 4 and 69 were rejected under 35 U.S.C. § 103(a) over Pyhalammi in view of Corts and further in view of Hirayama (U.S. Publication No. 2006/0069718);

claims 9 and 74 were rejected under 35 U.S.C. § 103(a) over Pyhalammi in view of Corts and further in view of Kadyk et al. (U.S. Patent No. 7,046,691);

claims 10, 17, 24, 75, 82 and 88 were rejected under 35 U.S.C. § 103(a) over Pyhalammi in view of Corts and further in view of Official Notice;

claims 11 and 76 were rejected under 35 U.S.C. § 103(a) over Pyhalammi in view of Corts and further in view of Marlow (U.S. Publication No. 2003/0046670);

claims 12 and 77 were rejected under 35 U.S.C. § 103(a) over Pyhalammi in view of Corts and further in view of Ellis et al. (U.S. Publication No. 2004/0194131);

claims 19 and 84 were rejected under 35 U.S.C. § 103(a) over Pyhalammi in view of Corts and further in view of Thompson et al. (U.S. Patent No. 6,907,247);

claims 6-7 and 71-72 were rejected under 35 U.S.C. § 103(a) over Pyhalammi in view of Corts and Hirayama and further in view of Lin et al. (U.S. Publication No. 2002/0146016);

claim 70 was rejected under 35 U.S.C. § 103(a) over Pyhalammi in view of Corts and Hirayama and further in view of Garrity.

It is respectfully submitted that the rejections of these claims are either moot or overcome by the amendments to claims 1, 26 and 39, from which these claims variously depend. The Office's reliance upon these secondary references does not make up for the deficiencies of Pyhalammi and Corts discussed above with respect to independent claim 1, and applicable to independent claims 26 and 39.

Accordingly, withdrawal of these rejections and allowance of the above-noted claims are respectfully requested for at least the above-noted reasons.

New Claims 90-93

New claims 90-93 have been added herein to round out the scope of protection sought. Dependent claims 90-92 have been added to recite subject matter involving the use of an exciter to broadcast data content via digital radio broadcast. Support may be found, for example, at least at FIG. 1 and paragraph 0037 of the published application. Of course, the claims are not limited to these examples. New independent claim 93 has been added to recite subject matter similar to that in claim 1 using somewhat different language. Claims 90-92 are allowable at least by virtue of dependency, and claim 93 is allowable at least for reasons set forth with regard to claim 1. Allowance of claims 90-93 is respectfully requested.

Application No. 10/007,338
Amendment

Conclusion

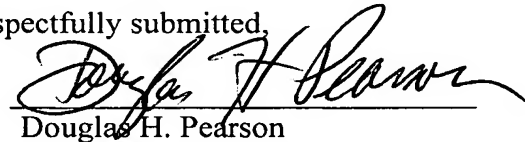
Therefore, all objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

The Commissioner is authorized to charge any fees that may be required by this paper to Jones Day Deposit Account No. 503-013 to maintain the pendency of this application.

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Respectfully submitted,

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